WHAT IS CLAIMED IS:

1.   A coordinate input apparatus which detects position coordinates of a coordinate input pointing tool, comprising:

5   calculation means for calculating position coordinates in a space defined by first to third axes of the coordinate input pointing tool;

comparison means for comparing a value of the first axis of the coordinate values calculated by the

10   calculation means with a predetermined value;

determination means for determining whether the coordinate values of the second and third axes of the coordinate values calculated by the calculation means fall within a predetermined range; and

15   output means for outputting the coordinate values calculated by the calculation means in a coordinate output form determined on the basis of a comparison result by the comparison means and a determination result by the determination means,

20   wherein the coordinate output form includes at least

an absolute coordinate output form in which the calculated coordinate values are directly output, and

a relative coordinate output form in which

25   differential values between the calculated coordinate values and predetermined coordinate values are output.

2.   The apparatus according to claim 1, wherein

the predetermined coordinate values are first

effective coordinate values during a continuous input

period in which coordinate input is continuously

executed, and

5   the apparatus further comprises storage means for

storing the first effective position coordinates

calculated by said calculation means during the

continuous input period as the predetermined coordinate

values.

10   3.   The apparatus according to claim 1, wherein

the apparatus further comprises a display

apparatus which is overlapped on the coordinate input

apparatus, and

the first axis defines a normal direction to a

15   display area plane of the display apparatus, and the

second and third axes define the display area plane of

the display apparatus.

4.   The apparatus according to claim 1, wherein the

coordinate output form further includes a relative

20   coordinate processing output form in which at least a

differential coordinate value between the coordinate

value of the second axis and the predetermined

coordinate value is multiplied and output.

5.   The apparatus according to claim 4, wherein

25   the apparatus further comprises a display

apparatus which is overlapped on the coordinate input

apparatus, and

the first axis defines a normal direction to a display area plane of the display apparatus, the second axis defines a horizontal direction of the display area plane of the display apparatus, and the third axis

5   defines a vertical direction of the display area plane of the display apparatus.

6.   The apparatus according to claim 4, wherein a magnification factor of the multiplication of the differential coordinate value in the relative

10   coordinate processing output form is set on the basis of the coordinate value of the first axis.

7.   The apparatus according to claim 4, wherein a magnification factor of the multiplication of the differential coordinate value in the relative

15   coordinate processing output form is set on the basis of the position coordinates.

8.   A coordinate input apparatus which detects position coordinates of a coordinate input pointing tool and displays information based on the position

20   coordinates on a display apparatus, comprising:

       calculation means for calculating the position coordinates of the coordinate input pointing tool;

       determination means for determining whether the position coordinates calculated by said calculation

25   means fall within a display area of the display apparatus; and

       determination means for determining on the basis

of a determination result whether the position

coordinates or differential coordinate values between

the position coordinates and predetermined coordinates

should be output.

5   9.   The apparatus according to claim 8, further

comprising setting means for setting the display area

of the display apparatus.

10.   The apparatus according to claim 9, wherein said

setting means sets the display area on the basis of

10   coordinate values of at least three display area corner

portions of the display area.

11.   The apparatus according to claim 9, wherein

the apparatus further comprises switch state

determination means for determining operative states of

15   a plurality of switches of the coordinate input

pointing tool, and

said coordinate output control means outputs the

position coordinates or the differential coordinate

values between the position coordinates and the

20   predetermined coordinates or inhibits output of the

position coordinates on the basis of the determination

result of said determination means and a determination

result of said switch state determination means.

12.   The apparatus according to claim 9, wherein

25   the predetermined coordinates are first effective

coordinate values during a continuous input period in

which coordinate input is continuously executed, and

the apparatus further comprises storage means for storing the first effective position coordinates calculated by said calculation means during the continuous input period as the predetermined

5 coordinates.

13. A control method of a coordinate input apparatus which detects position coordinates of a coordinate input pointing tool, comprising:

a calculation step of calculating position

10 coordinates in a space defined by first to third axes of the coordinate input pointing tool;

a comparison step of comparing a value of the first axis of the coordinate values calculated in the calculation step with a predetermined value;

15 a determination step of determining whether the coordinate values of the second and third axes, which are calculated in the calculation step, fall within a predetermined range; and

an output step of outputting the coordinate

20 values calculated in the calculation step in a coordinate output form determined on the basis of a comparison result in the comparison step and a determination result in the determination step,

wherein the coordinate output form includes at

25 least

an absolute coordinate output form in which the calculated coordinate values are directly output, and

a relative coordinate output form in which differential values between the calculated coordinate values and predetermined coordinate values are output.

14.   A control method of a coordinate input apparatus which detects position coordinates of a coordinate input pointing tool and displays information based on the position coordinates on a display apparatus, comprising:

a calculation step of calculating the position coordinates of the coordinate input pointing tool;

a determination step of determining whether the position coordinates calculated in the calculation step fall within a display area of the display apparatus; and

a determination step of determining on the basis of a determination result whether the position coordinates or differential coordinate values between the position coordinates and predetermined coordinates should be output.

15.   A program which causes a computer to function to control a coordinate input apparatus which detects position coordinates of a coordinate input pointing tool, comprising:

a program code for a calculation step of calculating position coordinates in a space defined by first to third axes of the coordinate input pointing tool;

a program code for a comparison step of comparing

a value of the first axis of the coordinate values

calculated in the calculation step with a predetermined

value;

5   a program code for a determination step of

determining whether the coordinate values of the second

and third axes, which are calculated in the calculation

step, fall within a predetermined range; and

a program code for an output step of outputting

10   the coordinate values calculated in the calculation

step in a coordinate output form determined on the

basis of a comparison result in the comparison step and

a determination result in the determination step,

wherein the coordinate output form includes at

15   least

an absolute coordinate output form in which the

calculated coordinate values are directly output, and

a relative coordinate output form in which

differential values between the calculated coordinate

20   values and predetermined coordinate values are output.

16.   A program which causes a computer to function to

control a coordinate input apparatus which detects

position coordinates of a coordinate input pointing

tool and displays information based on the position

25   coordinates on a display apparatus, comprising:

a program code for a calculation step of

calculating the position coordinates of the coordinate

input pointing tool;

a program code for a determination step of determining whether the position coordinates calculated in the calculation step fall within a display area of

5   the display apparatus; and

a program code for a coordinate output control step of outputting the position coordinates or differential coordinate values between the position coordinates and predetermined coordinates on the basis

10   of a determination result.